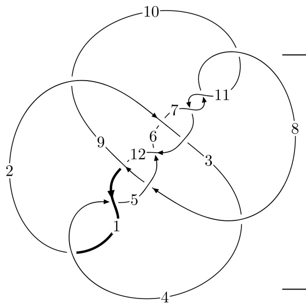
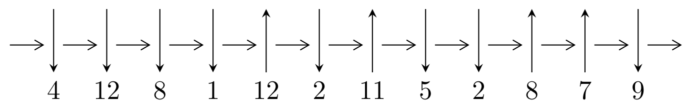
$12n_{0759}$ ($K12n_{0759}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

$$8{,}11 \xrightarrow[c_7]{} 7 \xrightarrow[c_{11}]{} 2{,}12 \xrightarrow[c_2]{} 3 \xrightarrow[c_3]{} 4 \xrightarrow[c_1]{} 1 \xrightarrow[c_6]{} 6 \xrightarrow[c_5]{} 5 \xrightarrow[c_{10}]{} 10 \xrightarrow[c_9]{} 9 \twoheadrightarrow c_4, c_8, c_{12}$$

Ideals for irreducible components[2]of $X_{\mathbf{par}}$

$$\begin{aligned}
I_1^u = \langle & 471524796u^{36} - 5108104574u^{35} + \cdots + 14952555511b + 27229387303, \\
& 12296434297u^{36} - 69707922846u^{35} + \cdots + 14952555110a - 105681891942, \\
& u^{37} - 8u^{36} + \cdots + 54u - 10\rangle \\
I_2^u = \langle & -u^{17}a - u^{17} + \cdots + b + a,\ u^{16}a + 2u^{17} + \cdots + a + 5,\ u^{18} + 5u^{17} + \cdots + 3u - 1\rangle \\
I_3^u = \langle & u^{16} + 5u^{15} + \cdots + b + 3,\ -3u^{17} - 17u^{16} + \cdots + 2a - 11,\ u^{18} + 5u^{17} + \cdots + 13u + 2\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 91 representations.

[1]The image of knot diagram is generated by the software "**Draw programme**" developed by Andrew Bartholomew(`http://www.layer8.co.uk/maths/draw/index.htm#Running-draw`), where we modified some parts for our purpose(`https://github.com/CATsTAILs/LinksPainter`).

[2]All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I. $\boldsymbol{I_1^u =}$
$\boldsymbol{\langle 4.72\times10^8u^{36}-5.11\times10^9u^{35}+\cdots+1.50\times10^9b+2.72\times10^{10},\ 1.23\times10^{10}u^{36}-6.97\times10^{10}u^{35}+\cdots+1.50\times10^{10}a-1.06\times10^{11},\ u^{37}-8u^{36}+\cdots+54u-10\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_7 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-0.822363u^{36}+4.66194u^{35}+\cdots-40.6849u+7.06781\\-0.315347u^{36}+3.41621u^{35}+\cdots+84.0045u-18.2105\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}u\\u^3+u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1.82105u^{36}-14.2531u^{35}+\cdots-80.8722u+14.3323\\1.02354u^{36}-7.91667u^{35}+\cdots-50.2937u+11.3771\end{pmatrix}$$
$$a_4 = \begin{pmatrix}0.797516u^{36}-6.33640u^{35}+\cdots-30.5786u+2.95520\\1.02354u^{36}-7.91667u^{35}+\cdots-50.2937u+11.3771\end{pmatrix}$$
$$a_1 = \begin{pmatrix}1.17552u^{36}-8.86307u^{35}+\cdots-58.6629u+12.1412\\0.968604u^{36}-9.68456u^{35}+\cdots-102.310u+21.5655\end{pmatrix}$$
$$a_6 = \begin{pmatrix}4.28726u^{36}-34.0282u^{35}+\cdots-123.485u+23.2929\\-2.54465u^{36}+18.9069u^{35}+\cdots+0.613399u+3.92450\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-0.392450u^{36}+5.68425u^{35}+\cdots+113.422u-20.8057\\1.18047u^{36}-6.84211u^{35}+\cdots+67.8836u-17.4261\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-u\\u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}2.92308u^{36}-21.9635u^{35}+\cdots-55.9879u+8.79131\\-2.66058u^{36}+17.9266u^{35}+\cdots+21.3706u-3.21429\end{pmatrix}$$

(ii) Obstruction class $=-1$

(iii) Cusp Shapes
$=-\frac{12741675491}{1495255511}u^{36}+\frac{101934190202}{1495255511}u^{35}+\cdots+\frac{510036125358}{1495255511}u-\frac{91985646542}{1495255511}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{37} - 11u^{36} + \cdots - 158u + 10$
c_2, c_6	$u^{37} + 20u^{35} + \cdots + 4u + 1$
c_3, c_9	$u^{37} - u^{36} + \cdots + 286u + 121$
c_5	$u^{37} - 32u^{36} + \cdots - 3538944u + 262144$
c_7, c_{10}, c_{11}	$u^{37} + 8u^{36} + \cdots + 54u + 10$
c_8, c_{12}	$u^{37} + u^{36} + \cdots + 5u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{37} + 23y^{36} + \cdots + 1464y - 100$
c_2, c_6	$y^{37} + 40y^{36} + \cdots - 24y - 1$
c_3, c_9	$y^{37} + 19y^{36} + \cdots - 31218y - 14641$
c_5	$y^{37} - 6y^{36} + \cdots + 51539607552y - 68719476736$
c_7, c_{10}, c_{11}	$y^{37} + 32y^{36} + \cdots + 1176y - 100$
c_8, c_{12}	$y^{37} + 21y^{36} + \cdots + y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.139810 + 0.947636I$ $a = 1.72762 - 0.66054I$ $b = -1.14617 - 0.94052I$	$2.14502 - 0.46485I$	$-1.94282 - 0.92392I$
$u = -0.139810 - 0.947636I$ $a = 1.72762 + 0.66054I$ $b = -1.14617 + 0.94052I$	$2.14502 + 0.46485I$	$-1.94282 + 0.92392I$
$u = 1.039010 + 0.115439I$ $a = -0.192987 + 0.037881I$ $b = -0.62037 + 1.63193I$	$10.1014 + 11.1664I$	$0. - 6.23795I$
$u = 1.039010 - 0.115439I$ $a = -0.192987 - 0.037881I$ $b = -0.62037 - 1.63193I$	$10.1014 - 11.1664I$	$0. + 6.23795I$
$u = 0.916293 + 0.067951I$ $a = 0.097764 + 0.172517I$ $b = 0.46237 - 1.48507I$	$5.40488 + 5.68156I$	$-1.59495 - 5.13236I$
$u = 0.916293 - 0.067951I$ $a = 0.097764 - 0.172517I$ $b = 0.46237 + 1.48507I$	$5.40488 - 5.68156I$	$-1.59495 + 5.13236I$
$u = 0.885871 + 0.114565I$ $a = 0.281357 + 0.113956I$ $b = -0.25335 - 1.47096I$	$9.31086 + 0.52432I$	$3.94650 - 0.50356I$
$u = 0.885871 - 0.114565I$ $a = 0.281357 - 0.113956I$ $b = -0.25335 + 1.47096I$	$9.31086 - 0.52432I$	$3.94650 + 0.50356I$
$u = 0.056118 + 1.111250I$ $a = -1.50526 + 0.77231I$ $b = 1.324570 + 0.077249I$	$0.897651 + 0.070840I$	$-4.00000 + 0.I$
$u = 0.056118 - 1.111250I$ $a = -1.50526 - 0.77231I$ $b = 1.324570 - 0.077249I$	$0.897651 - 0.070840I$	$-4.00000 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.609754 + 0.620108I$ $a = 0.782999 + 0.288087I$ $b = 0.627363 - 0.626705I$	$2.48681 - 2.57040I$	$-2.36259 + 3.28826I$
$u = -0.609754 - 0.620108I$ $a = 0.782999 - 0.288087I$ $b = 0.627363 + 0.626705I$	$2.48681 + 2.57040I$	$-2.36259 - 3.28826I$
$u = 0.086875 + 1.167150I$ $a = 1.63975 + 0.44424I$ $b = -1.11741 - 0.88125I$	$-4.39474 + 1.30377I$	$-15.9395 + 0.I$
$u = 0.086875 - 1.167150I$ $a = 1.63975 - 0.44424I$ $b = -1.11741 + 0.88125I$	$-4.39474 - 1.30377I$	$-15.9395 + 0.I$
$u = -0.245173 + 1.209770I$ $a = -0.978004 - 0.158481I$ $b = 0.640982 + 1.102120I$	$-0.79010 - 3.56350I$	0
$u = -0.245173 - 1.209770I$ $a = -0.978004 + 0.158481I$ $b = 0.640982 - 1.102120I$	$-0.79010 + 3.56350I$	0
$u = 0.443655 + 1.201050I$ $a = -1.79320 + 0.50024I$ $b = 0.819804 - 0.963504I$	$5.97221 + 4.23436I$	0
$u = 0.443655 - 1.201050I$ $a = -1.79320 - 0.50024I$ $b = 0.819804 + 0.963504I$	$5.97221 - 4.23436I$	0
$u = 0.435560 + 1.215640I$ $a = -1.06951 + 0.99559I$ $b = 0.263581 - 1.008440I$	$1.85513 - 0.84698I$	0
$u = 0.435560 - 1.215640I$ $a = -1.06951 - 0.99559I$ $b = 0.263581 + 1.008440I$	$1.85513 + 0.84698I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.295335+0.570556I$ $a=-0.576122+0.317004I$ $b=\ \ 0.130785+0.394729I$	$-0.109537-1.239830I$	$-1.37448+5.92241I$
$u=-0.295335-0.570556I$ $a=-0.576122-0.317004I$ $b=\ \ 0.130785-0.394729I$	$-0.109537+1.239830I$	$-1.37448-5.92241I$
$u=\ \ 0.614437+1.236310I$ $a=\ \ 0.902398-0.941361I$ $b=\ \ 0.392590+1.064250I$	$6.68893-5.37975I$	0
$u=\ \ 0.614437-1.236310I$ $a=\ \ 0.902398+0.941361I$ $b=\ \ 0.392590-1.064250I$	$6.68893+5.37975I$	0
$u=\ \ 0.434151+1.339220I$ $a=\ \ 1.76152-0.74711I$ $b=-1.14193+1.58433I$	$1.00539+10.52360I$	0
$u=\ \ 0.434151-1.339220I$ $a=\ \ 1.76152+0.74711I$ $b=-1.14193-1.58433I$	$1.00539-10.52360I$	0
$u=\ \ 0.38979+1.37969I$ $a=\ \ 0.93958-1.24376I$ $b=-0.37436+1.70929I$	$4.58667+5.11314I$	0
$u=\ \ 0.38979-1.37969I$ $a=\ \ 0.93958+1.24376I$ $b=-0.37436-1.70929I$	$4.58667-5.11314I$	0
$u=\ \ 0.48491+1.39397I$ $a=-1.66833+0.76934I$ $b=\ \ 1.01582-1.92652I$	$5.3737+16.5878I$	0
$u=\ \ 0.48491-1.39397I$ $a=-1.66833-0.76934I$ $b=\ \ 1.01582+1.92652I$	$5.3737-16.5878I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.456996+0.144661I$ $a=-0.60975-1.37109I$ $b=-0.583726-0.575126I$	$3.13815-0.83302I$	$-1.02036+3.40722I$
$u=-0.456996-0.144661I$ $a=-0.60975+1.37109I$ $b=-0.583726+0.575126I$	$3.13815+0.83302I$	$-1.02036-3.40722I$
$u=-0.05084+1.54951I$ $a=\ \ 0.027721+0.450422I$ $b=\ \ 0.223004-0.781521I$	$-7.37098-2.21708I$	0
$u=-0.05084-1.54951I$ $a=\ \ 0.027721-0.450422I$ $b=\ \ 0.223004+0.781521I$	$-7.37098+2.21708I$	0
$u=-0.12383+1.62650I$ $a=\ \ 0.376630-0.307169I$ $b=-0.973816+0.280615I$	$-5.40481-5.27286I$	0
$u=-0.12383-1.62650I$ $a=\ \ 0.376630+0.307169I$ $b=-0.973816-0.280615I$	$-5.40481+5.27286I$	0
$u=\ \ 0.270127$ $a=-2.08837$ $b=\ \ 0.620523$	-1.19161	-2.79840

II.
$\boldsymbol{I_2^u = \langle -u^{17}a - u^{17} + \cdots + b + a,\ u^{16}a + 2u^{17} + \cdots + a + 5,\ u^{18} + 5u^{17} + \cdots + 3u - 1\rangle}$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} a \\ u^{17}a + u^{17} + \cdots - a + 2u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^{17}a - 4u^{16}a + \cdots + 2a - u \\ -u^{17}a - 4u^{16}a + \cdots + a + 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^{16} + 4u^{15} + \cdots + a - 1 \\ -u^{17}a - 4u^{16}a + \cdots + a + 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^{16} - 4u^{15} + \cdots + a + 2 \\ u^{17}a + 4u^{16}a + \cdots - a - 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^{15}a - u^{16} + \cdots - a + 3 \\ u^{17}a + 4u^{16}a + \cdots - a - 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{15}a - u^{16} + \cdots - a + 3 \\ u^{17}a + 4u^{16}a + \cdots - a - 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{16} - 6u^{15} + \cdots - a - 2 \\ u^{17}a + 4u^{16}a + \cdots - a - 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^{16} + 20u^{15} + 72u^{14} + 180u^{13} + 356u^{12} + 572u^{11} + 744u^{10} + 808u^9 + 692u^8 + 460u^7 + 204u^6 + 12u^5 - 36u^4 - 32u^3 + 8u^2 + 20u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$(u^{18} + 5u^{17} + \cdots + 3u - 1)^2$
c_2, c_6	$u^{36} - 5u^{35} + \cdots - 8364u + 2329$
c_3, c_9	$u^{36} - u^{35} + \cdots + 8146u + 1229$
c_5	$(u + 1)^{36}$
c_7, c_{10}, c_{11}	$(u^{18} - 5u^{17} + \cdots - 3u - 1)^2$
c_8, c_{12}	$u^{36} + 5u^{35} + \cdots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_7 c_{10}, c_{11}	$(y^{18} + 13y^{17} + \cdots - 11y + 1)^2$
c_2, c_6	$y^{36} + 15y^{35} + \cdots + 24442532y + 5424241$
c_3, c_9	$y^{36} + 23y^{35} + \cdots - 9149824y + 1510441$
c_5	$(y - 1)^{36}$
c_8, c_{12}	$y^{36} - 5y^{35} + \cdots + 20y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.912787$ $a = -0.316703 + 0.131353I$ $b = -0.415001 - 1.265310I$	4.47245	-3.52670
$u = -0.912787$ $a = -0.316703 - 0.131353I$ $b = -0.415001 + 1.265310I$	4.47245	-3.52670
$u = 0.193687 + 1.098120I$ $a = 0.25197 - 1.40720I$ $b = -0.00135 + 2.27636I$	$0.62200 + 7.06147I$	$-4.14650 - 10.25752I$
$u = 0.193687 + 1.098120I$ $a = -2.64599 - 0.58963I$ $b = 1.112400 - 0.674637I$	$0.62200 + 7.06147I$	$-4.14650 - 10.25752I$
$u = 0.193687 - 1.098120I$ $a = 0.25197 + 1.40720I$ $b = -0.00135 - 2.27636I$	$0.62200 - 7.06147I$	$-4.14650 + 10.25752I$
$u = 0.193687 - 1.098120I$ $a = -2.64599 + 0.58963I$ $b = 1.112400 + 0.674637I$	$0.62200 - 7.06147I$	$-4.14650 + 10.25752I$
$u = -1.098040 + 0.205475I$ $a = 0.433613 + 0.557861I$ $b = 0.95722 + 2.11469I$	$7.71440 - 1.25989I$	$8.84485 + 4.81225I$
$u = -1.098040 + 0.205475I$ $a = -0.067996 + 0.235470I$ $b = 0.055833 - 0.954772I$	$7.71440 - 1.25989I$	$8.84485 + 4.81225I$
$u = -1.098040 - 0.205475I$ $a = 0.433613 - 0.557861I$ $b = 0.95722 - 2.11469I$	$7.71440 + 1.25989I$	$8.84485 - 4.81225I$
$u = -1.098040 - 0.205475I$ $a = -0.067996 - 0.235470I$ $b = 0.055833 + 0.954772I$	$7.71440 + 1.25989I$	$8.84485 - 4.81225I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.074623 + 1.166690I$ $a = 0.948927 + 0.761406I$ $b = -0.68925 - 1.45078I$	$-4.42453 + 1.25989I$	$-12.84485 - 4.81225I$
$u = 0.074623 + 1.166690I$ $a = 2.01169 + 0.29861I$ $b = -1.225920 - 0.410668I$	$-4.42453 + 1.25989I$	$-12.84485 - 4.81225I$
$u = 0.074623 - 1.166690I$ $a = 0.948927 - 0.761406I$ $b = -0.68925 + 1.45078I$	$-4.42453 - 1.25989I$	$-12.84485 + 4.81225I$
$u = 0.074623 - 1.166690I$ $a = 2.01169 - 0.29861I$ $b = -1.225920 + 0.410668I$	$-4.42453 - 1.25989I$	$-12.84485 + 4.81225I$
$u = -0.618147 + 1.082030I$ $a = 1.224620 - 0.051654I$ $b = -0.763703 - 0.555491I$	$5.04831 - 4.71254I$	$4.73930 + 5.43197I$
$u = -0.618147 + 1.082030I$ $a = -1.21202 - 1.10387I$ $b = -1.114730 + 0.784301I$	$5.04831 - 4.71254I$	$4.73930 + 5.43197I$
$u = -0.618147 - 1.082030I$ $a = 1.224620 + 0.051654I$ $b = -0.763703 + 0.555491I$	$5.04831 + 4.71254I$	$4.73930 - 5.43197I$
$u = -0.618147 - 1.082030I$ $a = -1.21202 + 1.10387I$ $b = -1.114730 - 0.784301I$	$5.04831 + 4.71254I$	$4.73930 - 5.43197I$
$u = -0.088119 + 1.247720I$ $a = -0.055705 + 0.760873I$ $b = -0.129650 + 0.365843I$	$-1.75844 - 4.71254I$	$-8.73930 + 5.43197I$
$u = -0.088119 + 1.247720I$ $a = -2.17705 - 0.69599I$ $b = 2.28573 + 1.08019I$	$-1.75844 - 4.71254I$	$-8.73930 + 5.43197I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.088119 - 1.247720I$ $a = -0.055705 - 0.760873I$ $b = -0.129650 - 0.365843I$	$-1.75844 + 4.71254I$	$-8.73930 - 5.43197I$
$u = -0.088119 - 1.247720I$ $a = -2.17705 + 0.69599I$ $b = 2.28573 - 1.08019I$	$-1.75844 + 4.71254I$	$-8.73930 - 5.43197I$
$u = -0.438063 + 1.312710I$ $a = 0.981041 + 0.771931I$ $b = -0.266538 - 0.848544I$	$0.37326 - 4.83126I$	$-7.11010 + 2.24363I$
$u = -0.438063 + 1.312710I$ $a = -1.55067 - 0.56043I$ $b = 1.10173 + 1.50831I$	$0.37326 - 4.83126I$	$-7.11010 + 2.24363I$
$u = -0.438063 - 1.312710I$ $a = 0.981041 - 0.771931I$ $b = -0.266538 + 0.848544I$	$0.37326 + 4.83126I$	$-7.11010 - 2.24363I$
$u = -0.438063 - 1.312710I$ $a = -1.55067 + 0.56043I$ $b = 1.10173 - 1.50831I$	$0.37326 + 4.83126I$	$-7.11010 - 2.24363I$
$u = -0.52615 + 1.42545I$ $a = -0.966701 - 0.471265I$ $b = 0.693432 + 0.999976I$	$2.66787 - 7.06147I$	$0.14650 + 10.25752I$
$u = -0.52615 + 1.42545I$ $a = 1.51704 + 0.90563I$ $b = -0.50804 - 2.48535I$	$2.66787 - 7.06147I$	$0.14650 + 10.25752I$
$u = -0.52615 - 1.42545I$ $a = -0.966701 + 0.471265I$ $b = 0.693432 - 0.999976I$	$2.66787 + 7.06147I$	$0.14650 - 10.25752I$
$u = -0.52615 - 1.42545I$ $a = 1.51704 - 0.90563I$ $b = -0.50804 + 2.48535I$	$2.66787 + 7.06147I$	$0.14650 - 10.25752I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.316467 + 0.267299I$ $a = -1.22025 - 1.72230I$ $b = -1.118440 - 0.785603I$	$2.91661 - 4.83126I$	$3.11010 + 2.24363I$
$u = 0.316467 + 0.267299I$ $a = 2.99288 - 0.82848I$ $b = -0.141618 + 0.818664I$	$2.91661 - 4.83126I$	$3.11010 + 2.24363I$
$u = 0.316467 - 0.267299I$ $a = -1.22025 + 1.72230I$ $b = -1.118440 + 0.785603I$	$2.91661 + 4.83126I$	$3.11010 - 2.24363I$
$u = 0.316467 - 0.267299I$ $a = 2.99288 + 0.82848I$ $b = -0.141618 - 0.818664I$	$2.91661 + 4.83126I$	$3.11010 - 2.24363I$
$u = 0.280251$ $a = -2.14871 + 0.64223I$ $b = 0.667889 + 0.191026I$	-1.18258	-0.473290
$u = 0.280251$ $a = -2.14871 - 0.64223I$ $b = 0.667889 - 0.191026I$	-1.18258	-0.473290

III. $I^u_3 = \langle u^{16}+5u^{15}+\cdots+b+3,\ -3u^{17}-17u^{16}+\cdots+2a-11,\ u^{18}+5u^{17}+\cdots+13u+2\rangle$

(i) Arc colorings

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} \frac{3}{2}u^{17} + \frac{17}{2}u^{16} + \cdots + 31u + \frac{11}{2} \\ -u^{16} - 5u^{15} + \cdots - 16u - 3 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} \frac{3}{2}u^{17} + \frac{15}{2}u^{16} + \cdots + 17u + \frac{7}{2} \\ -u^{16} - 5u^{15} + \cdots - 17u - 3 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} \frac{3}{2}u^{17} + \frac{17}{2}u^{16} + \cdots + 34u + \frac{13}{2} \\ -u^{16} - 5u^{15} + \cdots - 17u - 3 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} \frac{1}{2}u^{17} + \frac{5}{2}u^{16} + \cdots + 16u + \frac{3}{2} \\ -u^9 - 3u^8 - 9u^7 - 16u^6 - 24u^5 - 27u^4 - 22u^3 - 15u^2 - 5u - 1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} \frac{1}{2}u^{17} + \frac{7}{2}u^{16} + \cdots + 26u + \frac{13}{2} \\ -u^{16} - 4u^{15} + \cdots - 3u - 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} \frac{1}{2}u^{17} + \frac{5}{2}u^{16} + \cdots + 14u + \frac{9}{2} \\ -u^3 - u^2 - 2u - 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -\frac{1}{2}u^{17} - \frac{5}{2}u^{16} + \cdots - 22u - \frac{7}{2} \\ u^6 + 2u^5 + 5u^4 + 6u^3 + 6u^2 + 4u + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 2u^{17} + 3u^{16} + 15u^{15} + 12u^{14} + 26u^{13} - 13u^{12} - 41u^{11} - 106u^{10} - 145u^9 - 101u^8 - 54u^7 + 89u^6 + 142u^5 + 163u^4 + 144u^3 + 55u^2 + 40u$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18} - 8u^{17} + \cdots - 73u + 12$
c_2, c_6	$u^{18} - 3u^{14} + \cdots - 6u^2 + 1$
c_3, c_9	$u^{18} - u^{17} + \cdots - u^2 + 1$
c_4	$u^{18} + 8u^{17} + \cdots + 73u + 12$
c_5	$u^{18} + 5u^{17} + \cdots - 3u + 7$
c_7	$u^{18} + 5u^{17} + \cdots + 13u + 2$
c_8, c_{12}	$u^{18} - u^{17} + \cdots + u + 1$
c_{10}, c_{11}	$u^{18} - 5u^{17} + \cdots - 13u + 2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{18} + 10y^{17} + \cdots + 623y + 144$
c_2, c_6	$y^{18} - 6y^{16} + \cdots - 12y + 1$
c_3, c_9	$y^{18} + 11y^{17} + \cdots - 2y + 1$
c_5	$y^{18} - 5y^{17} + \cdots - 597y + 49$
c_7, c_{10}, c_{11}	$y^{18} + 19y^{17} + \cdots + 39y + 4$
c_8, c_{12}	$y^{18} - 3y^{17} + \cdots + 3y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.005820 + 0.143618I$ $a = -0.191143 - 0.040717I$ $b = -0.163157 - 1.366040I$	$6.70136 - 0.69923I$	$-0.082570 + 0.255758I$
$u = -1.005820 - 0.143618I$ $a = -0.191143 + 0.040717I$ $b = -0.163157 + 1.366040I$	$6.70136 + 0.69923I$	$-0.082570 - 0.255758I$
$u = -0.108804 + 1.151700I$ $a = -1.76688 + 0.65260I$ $b = 1.10749 - 0.99631I$	$-4.02138 - 1.16907I$	$3.75736 - 3.23683I$
$u = -0.108804 - 1.151700I$ $a = -1.76688 - 0.65260I$ $b = 1.10749 + 0.99631I$	$-4.02138 + 1.16907I$	$3.75736 + 3.23683I$
$u = 0.079474 + 1.171950I$ $a = 1.53601 - 0.65895I$ $b = -0.79013 + 1.51732I$	$-0.20326 + 5.79607I$	$-5.72434 - 5.34843I$
$u = 0.079474 - 1.171950I$ $a = 1.53601 + 0.65895I$ $b = -0.79013 - 1.51732I$	$-0.20326 - 5.79607I$	$-5.72434 + 5.34843I$
$u = -0.566647 + 1.152440I$ $a = 1.188160 + 0.386784I$ $b = -0.136894 - 0.761815I$	$3.59865 - 4.81934I$	$-2.65309 + 4.91066I$
$u = -0.566647 - 1.152440I$ $a = 1.188160 - 0.386784I$ $b = -0.136894 + 0.761815I$	$3.59865 + 4.81934I$	$-2.65309 - 4.91066I$
$u = 0.043618 + 0.529613I$ $a = 1.40097 - 1.49588I$ $b = 0.590722 + 0.667130I$	$1.95706 - 5.18785I$	$-6.23632 + 5.50637I$
$u = 0.043618 - 0.529613I$ $a = 1.40097 + 1.49588I$ $b = 0.590722 - 0.667130I$	$1.95706 + 5.18785I$	$-6.23632 - 5.50637I$

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.47475 + 1.39812I$ $a = -1.179570 - 0.770752I$ $b = 0.59799 + 1.57020I$	$1.87518 - 5.99210I$	$-3.66371 + 3.71889I$
$u = -0.47475 - 1.39812I$ $a = -1.179570 + 0.770752I$ $b = 0.59799 - 1.57020I$	$1.87518 + 5.99210I$	$-3.66371 - 3.71889I$
$u = -0.08311 + 1.51235I$ $a = -0.379469 + 0.480793I$ $b = 0.485462 - 0.844585I$	$-7.63748 - 1.81605I$	$-11.92101 - 4.04816I$
$u = -0.08311 - 1.51235I$ $a = -0.379469 - 0.480793I$ $b = 0.485462 + 0.844585I$	$-7.63748 + 1.81605I$	$-11.92101 + 4.04816I$
$u = -0.315334 + 0.278447I$ $a = 1.04390 + 1.08403I$ $b = -0.603695 + 0.097936I$	$-1.45757 - 0.47837I$	$-8.82227 + 8.75123I$
$u = -0.315334 - 0.278447I$ $a = 1.04390 - 1.08403I$ $b = -0.603695 - 0.097936I$	$-1.45757 + 0.47837I$	$-8.82227 - 8.75123I$
$u = -0.06863 + 1.59394I$ $a = 0.598023 + 0.023436I$ $b = -1.087790 + 0.106451I$	$-5.74737 - 5.68174I$	$-10.6541 + 9.4506I$
$u = -0.06863 - 1.59394I$ $a = 0.598023 - 0.023436I$ $b = -1.087790 - 0.106451I$	$-5.74737 + 5.68174I$	$-10.6541 - 9.4506I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{18}-8u^{17}+\cdots-73u+12)(u^{18}+5u^{17}+\cdots+3u-1)^2$ $\cdot(u^{37}-11u^{36}+\cdots-158u+10)$
c_2, c_6	$(u^{18}-3u^{14}+\cdots-6u^2+1)(u^{36}-5u^{35}+\cdots-8364u+2329)$ $\cdot(u^{37}+20u^{35}+\cdots+4u+1)$
c_3, c_9	$(u^{18}-u^{17}+\cdots-u^2+1)(u^{36}-u^{35}+\cdots+8146u+1229)$ $\cdot(u^{37}-u^{36}+\cdots+286u+121)$
c_4	$((u^{18}+5u^{17}+\cdots+3u-1)^2)(u^{18}+8u^{17}+\cdots+73u+12)$ $\cdot(u^{37}-11u^{36}+\cdots-158u+10)$
c_5	$((u+1)^{36})(u^{18}+5u^{17}+\cdots-3u+7)$ $\cdot(u^{37}-32u^{36}+\cdots-3538944u+262144)$
c_7	$((u^{18}-5u^{17}+\cdots-3u-1)^2)(u^{18}+5u^{17}+\cdots+13u+2)$ $\cdot(u^{37}+8u^{36}+\cdots+54u+10)$
c_8, c_{12}	$(u^{18}-u^{17}+\cdots+u+1)(u^{36}+5u^{35}+\cdots+4u+1)$ $\cdot(u^{37}+u^{36}+\cdots+5u+1)$
c_{10}, c_{11}	$((u^{18}-5u^{17}+\cdots-3u-1)^2)(u^{18}-5u^{17}+\cdots-13u+2)$ $\cdot(u^{37}+8u^{36}+\cdots+54u+10)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$(y^{18}+10y^{17}+\cdots+623y+144)(y^{18}+13y^{17}+\cdots-11y+1)^2$ $\cdot\,(y^{37}+23y^{36}+\cdots+1464y-100)$
c_2, c_6	$(y^{18}-6y^{16}+\cdots-12y+1)$ $\cdot\,(y^{36}+15y^{35}+\cdots+24442532y+5424241)$ $\cdot\,(y^{37}+40y^{36}+\cdots-24y-1)$
c_3, c_9	$(y^{18}+11y^{17}+\cdots-2y+1)$ $\cdot\,(y^{36}+23y^{35}+\cdots-9149824y+1510441)$ $\cdot\,(y^{37}+19y^{36}+\cdots-31218y-14641)$
c_5	$((y-1)^{36})(y^{18}-5y^{17}+\cdots-597y+49)$ $\cdot\,(y^{37}-6y^{36}+\cdots+51539607552y-68719476736)$
c_7, c_{10}, c_{11}	$((y^{18}+13y^{17}+\cdots-11y+1)^2)(y^{18}+19y^{17}+\cdots+39y+4)$ $\cdot\,(y^{37}+32y^{36}+\cdots+1176y-100)$
c_8, c_{12}	$(y^{18}-3y^{17}+\cdots+3y+1)(y^{36}-5y^{35}+\cdots+20y+1)$ $\cdot\,(y^{37}+21y^{36}+\cdots+y-1)$